possible that such a large number as recovered by the writer could have done so. This possibility, however, should not be overlooked.

The other possibility is that the female parasite larviposited on the body of the mantid as does *S. kellyi* and other species when parasitizing grasshoppers. Neither of these two possibilities is supported by the experiments that were performed with the mantids and the adult parasites, but it is possible that nymphs are attacked, or that laboratory conditions kept the parasites from reacting normally. Although a female fly might have some difficulty in approaching closely to an adult or nymphal mantid, this could be accomplished while the mantid was eating another insect.

Until additional data are forthcoming, the writer is inclined to regard the present cases as instances of true parasitism, but accidental in the sense that the mantid is probably not the usual host for the parasite. If, however, additional investigation should indicate that the parasite attacks mantids more heavily in this or other localities, the present interpretation would probably have to be modified or revised.

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THREE NEW SYNTORMON (DIPTERA: DOLICHOPODIDAE) FROM WESTERN UNITED STATES.[1]

By F. C. Harmston and G. F. Knowlton.[2]

The following report deals with three apparently new species of *Syntormon* (Dolichopodidae, Diptera). Like nearly all *Syn-*

[1] Contribution from the Department of Entomology, Utah Agricultural Experiment Station.

[2] Graduate assistant and research associate professor of entomology, respectively.

tormon males, the three species here described have the posterior basitarsi somewhat modified by the presence of a prominent sinuous bristle upon the plantar surface.

Syntormon kennedyi, n. sp.[3]

Male.—Length, 3 mm.; of wing, 3.2 mm. Face moderately wide on upper portion, narrow below, silvery pollinose. Front metallic blue-green, the reflections near the vertex coppery. Antennae (fig. 4) black; third joint broad at base, tapering to a sharp point, densely pubescent; arista about same length as third joint, sub-apical. Orbital cilia white, a few of the upper cilia black.

Dorsum of thorax bronze, the extreme upper lateral margins with a greenish luster; pleurae greenish, thickly dusted with white pollen, the posterior edge yellow. Dorsum of abdomen black with bronze reflections; second and third segments broadly yellow on lateral margins; venter of four basal segments yellow; posterior edge of first segment with long black hairs on the dorsum, the hairs along lateral portion yellowish; otherwise the abdomen is clothed with short black hairs. Hypopygium embedded, the outer appendages small, pale, fringed with yellowish cilia.

Coxae, femora and tibiae yellow, the posterior tibiae thickened and blackened on the apical fifth. Coxae with delicate pale cilia on anterior surfaces, the bristles at apex brownish; posterior coxae with a strong black bristle on outer surface. Middle femora with a row of short, sharp black bristles along lower edge, becoming shorter toward the apex; fore tibiae with a dense row of short, but conspicuous, bristles along the inner anterior surface. Fore tarsi blackened from the tip of first joint; middle tarsi (fig. 7) with third and fourth segments conspicuously compressed, fifth joint plain, tarsi black beyond the middle of the second joint; posterior tarsi (fig. 11) black from near base of second joint, the first and second joints brown, the basitarsi somewhat flattened on lower surface and bearing a conspicuous bisinuate bristle near the tip, this bristle being about ⅔ the length of basitarsus. Joints of fore tarsi as 12–5–4–3–3; of middle tarsi as 14–5–5–4–3; of hind tarsi as 8–7–6–5–3. Halteres pale yellow; calypters yellow with narrow black margin, their cilia pale.

Wings (fig. 3) grayish hyaline, broadest opposite the cross-vein; anal angle not prominent, evenly tapered toward the base of wing.

Described from two males, both taken at Cameron Pass, Colorado, August 18, 1940, by G. F. Knowlton. Holotype deposited in the U. S. National Museum; paratype in the insect collection of the Utah Agricultural Experiment Station.

Taxonomy: Syntormon kennedyi, n. sp., belongs in the group of closely related species which includes *palmaris* Lw. and *utahensis*, n. sp. In *palmaris* Lw. (fig. 9) the third and fourth joints of middle tarsi are greatly flattened, the second joint is entirely white, whereas in *kennedyi* the third and fourth joints of middle tarsi are noticeably, but not greatly, flattened and the second

[3] Named in honor of Dr. C. H. Kennedy, professor of entomology at Ohio State University.

joint is blackened on the apical half. In *utahensis*, n. sp., the last four joints of middle tarsi are greatly flattened dorsoventrally, the second joint is entirely white and equal in length to the third and fourth joints combined. *Syntormon utahensis* is the only one of the above three species which has the posterior tibiae wholly yellow.

Syntormon utahensis, n. sp.

Male.—Length, 3 mm.; of wing, 2.6 mm. Face moderately wide on upper portion, narrowed below, silvery pollinose. Front metallic, blue, greenish above base of antennae. Antennae (fig. 1) black; third joint pubescent, obliquely truncate and pointed at tip; arista sub-apical, slightly longer than the third joint. Orbital cilia white, the upper cilia are black and descend nearly one-half the eye height.

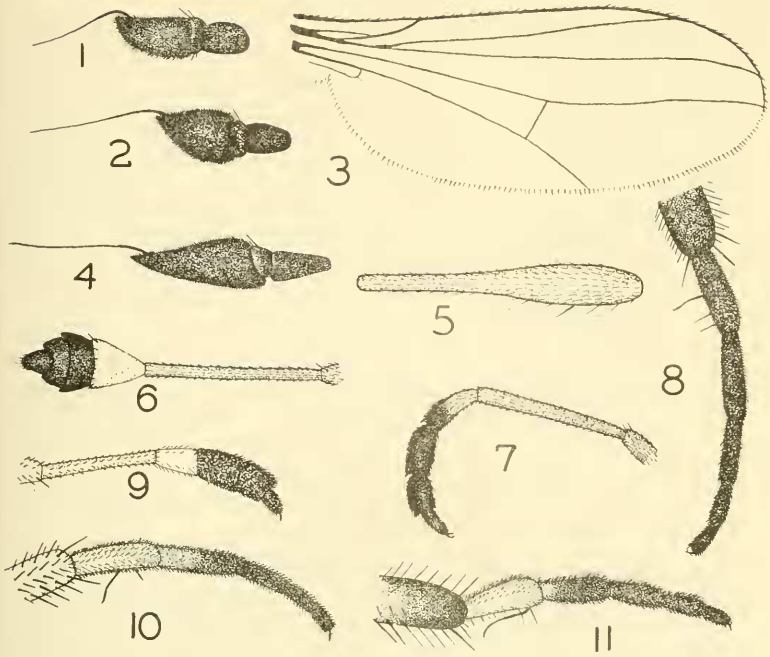
Dorsum of thorax dull metallic green; pleurae greenish, dusted with white pollen, the posterior margin yellow. Dorsum of abdomen black with bronze reflections; lateral and ventral portions of four basal segments yellow. Hypopygium embedded, without evident outer appendages.

Coxae, femora and tibiae wholly yellow. Fore coxae with minute pale hairs on anterior surfaces and the usual black bristles at tips. Middle femora (fig. 5) with a series of about 6 conspicuous black bristles along lower edge; fore tibiae with a dense row of short, sharp black bristles along the inner anterior surface. Fore tarsi blackened from the tip of second joint. First joint of middle tarsi (fig. 6) long, stalk-like; second joint flattened, white; last three segments compressed, velvety-black, the latter, together with the second joint form an elongate-oval tip to the middle tarsi. Posterior tarsi blackened from the middle of second segment, the basal half of the second segment and the first segment are brown, the latter (fig. 10) bears a conspicuous, sinuous bristle on the lower edge near the middle and a shorter, straight bristle slightly beyond the middle. Joints of fore tarsi as 11–5–3–2½–2½; of middle tarsi as 16–5–3–3–2; of posterior tarsi as 9–9–5–4–3. Halteres pale yellow; calypters yellow with narrow black apical margin, and cilia pale.

Wings grayish hyaline, broadest opposite the tip of fifth vein; anal angle evenly rounded, prominent.

Described from one male taken at Marysvale, Utah, June 20, 1940, by G. F. Knowlton and F. C. Harmston. Holotype deposited in the U. S. National Museum.

Taxonomy; Syntormon utahensis, n. sp., is readily distinguished from other species of the genus by having the last four segments of the middle tarsi greatly compressed dorso-ventrally and in possessing wholly yellow posterior tibiae. *Syntormon palmaris* Lw. and *S. kennedyi*, n. sp., might be confused with *utahensis* but they differ in having the third and fourth joints of middle tarsi laterally compressed and the posterior tibiae are blackened at the apices.



Syntormon utahensis, n. sp., male 1, 5–6, 10. *S.oregonensis*, n. sp., male, 2, 8. *S. kennedyi*, n. sp., male, 3–4, 7, 11. *S. palmaris* Loew, male, 9.

Syntormon oregonensis, n. sp.

Male.—Length 3.2 mm.; of wing 3.5 mm. Face moderately wide, silvery pollinose. Front metallic green. Antennae (fig. 2) black; third joint slightly longer than wide, evenly rounded below; arista nearly apical, approximately twice the length of third joint. Lower orbital cilia white; upper cilia black, descend about one-third the eye height.

Dorsum of thorax metallic green; pleurae greenish with thick white pollen. Abdomen wholly dark metallic green, the dorsum with deep bronze reflections. Hypopygium embedded.

Fore coxae yellow, the anterior surfaces with conspicuous white hairs; middle and hind coxae black. Femora yellow, the posterior pair blackened on apical third. Fore and middle tibiae yellow; posterior tibiae black, gradually thickened from beyond the basal third, the outer surface clothed with conspicuous black hairs and bristles. Fore tarsi blackened from the tip of first joint; middle and hind tarsi wholly black, the former of plain structure; posterior basitarsi (fig. 8) with a prominent sinuous bristle on the lower surface near the middle, and two shorter, straight bristles slightly beyond the middle. Joints of fore tarsi as 10–5–5–3–3; of middle tarsi as 12–5–5–4–3; of posterior tarsi as 8–8–6–5–4. Calypters and halteres yellow, the former with narrow black apical margin and pale cilia.

Wings grayish hyaline; anal angle moderately prominent, evenly rounded.

Described from one male collected at Portland, Oregon, September 5, 1940, by F. C. and V. H. Harmston. Holotype deposited in the U. S. National Museum.

Taxonomy: Syntormon oregonensis, n. sp., is readily distinguished from other described species of the genus by the wholly black posterior tibiae together with the yellow fore and middle femora; no other known species of *Syntormon* occurring in North America has the above combination of leg colors. It is much like *affinis* Wheeler in general appearance, but in that species the fore coxae are wholly darkened and the posterior tibiae are blackened only on the apical third.

THE TAXONOMIC STATUS OF THE SO-CALLED "COMMON RED SPIDER."

By E. A. McGregor,
Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture.

ABSTRACT

For many years the term "common red spider" has been applied to what was believed to be a single, widespread species of spinning mite of the genus *Tetranychus*. The scientific name *Tetranychus telarius* (L.) has been most commonly applied to this presumably single species. From the information now available it is indicated that the species *T. telarius* (L.) is not present in the United States and that the term "common red spider" has been applied indiscriminately to two species, *T. althaeae* Von Hanst. and *T. bimaculatus* Harv.

In 1758 Linnaeus [1] described a mite from the linden tree in Europe under the name *Acarus telarius*. The species was later referred to the genus *Tetranychus*, although Linnaeus' description was so vague that it might have applied to almost any spinning mite, and it would be impossible to establish the identity of *telarius* with reasonable certainty if it were not for the fact that Linnaeus recorded the linden tree as its natural host.

In 1901 Von Hanstein [2] described a mite (*Tetranychus althaeae*) from hollyhock in Europe. In addition to Von Hanstein, Tragardh [3] and Zacher [4] showed that *T. althaeae* is very distinct from *T. telarius*. The author has studied named specimens of these mites, sent to him by Zacher and others, and finds them to be distinct, one from the other.

With the establishment of the morphological differences between *Tetranychus telarius* and *T. althaeae*, observations were

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[1] Syst. Nat. (ed. 10), vol. 1, 1758, p. 616.
[2] Ztschr. f. Wiss. Zool., vol. 70, 1901, p. 74, pl. 6, figs. 1, 2, 4, 5.
[3] [Sweden] Centralanst. för Försöksv. på Jordbruksområdet, Meddel. 109, No. 20, 1915, pp. 42, 43, figs. 19, 20.
[4] K. Biol. Anst. f. Land u. Forstw., Mitt., No. 14, 1913, pp. 39–40.